

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/08809

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.⁷ C07C237/06, 271/22, C07D207/20, 211/70, 295/20, 401/04,
401/06, 401/12, 405/12, 409/04, 417/06, A61K31/165, 31/27,
31/40, 31/451, 31/4523, 31/453, 31/4535, 31/454, 31/4545,

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁷ C07C237/06, 271/22, C07D207/20, 211/70, 295/20, 401/04,
401/06, 401/12, 405/12, 409/04, 417/06, A61K31/165, 31/27,
31/40, 31/451, 31/4523, 31/453, 31/4535, 31/454, 31/4545,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

STN (CA, REGISTRY)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 710661 A1 (Tobishi Pharmaceutical Co., Ltd.), 08 May, 1996 (08.05.96), Example 19 & JP 8-119940 A & US 5716958 A	1, 3
X	US 4297346 A (Institut National de la Sante et de la Recherche Medicale), 27 October, 1981 (27.10.81), Table III & DE 2755036 A1 & GB 1592552 A	1, 11-17, 21
X	R.S. KAMEL, J. LANDON, D.S. SMITH, "Novel ¹²⁵ I-Labeled Nortriptyline Derivatives and their Use in Liquid- Phase or Magnetizable Solid-Phase Second-Antibody Radioimmunoassays", Clinical Chemistry, 1979, Vol.25, No.12, pages 1997 to 2002	1, 2, 5

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not
considered to be of particular relevance
"E" earlier document but published on or after the international filing
date
"L" document which may throw doubts on priority claim(s) or which is
cited to establish the publication date of another citation or other
special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other
means
"P" document published prior to the international filing date but later
than the priority date claimed

"T" later document published after the international filing date or
priority date and not in conflict with the application but cited to
understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be
considered novel or cannot be considered to involve an inventive
step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be
considered to involve an inventive step when the document is
combined with one or more other such documents, such
combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search
21 October, 2002 (21.10.02)

Date of mailing of the international search report
19 November, 2002 (19.11.02)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/08809

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	WO 02/22588 A1 (Ajinomoto Co., Inc.), 21 March, 2002 (21.03.02), Full text & AU 2001-84504 A	1-23
A	WO 00/01375 A1 (Neuromed Technologies, Inc.), 13 January, 2000 (13.01.00), Full text & JP 2002-519372 A & EP 1091737 A2	1-23
A	WO 95/11238 A1 (SmithKline Beecham Plc), 27 April, 1995 (27.04.95), Full text & JP 9-504016 A & EP 724577 A1	1-23

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/08809

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 1, 2, 5, 11-13, 15-19, 21, and 22
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Claims 1, 2, 5, 11-13, 15-19, 21, and 22 are inadequately supported by the description. Consequently, a relevant prior art technique cannot be specified.
(to be continued on the last sheet)
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/08809

Continuation of Box No. I-2 of continuation of first sheet (1)

Claim 1 and other claims include compounds which are not specifically disclosed in the description and are considerably different in functional group, molecular structure, etc. from the compounds specifically disclosed in the description (for example, compounds in which both R^{11} and R^{12} are hydrogen and compounds in which A is $NR^{17}CO$ wherein R^{17} is aryl; hereinafter, such compounds are referred to as "compounds lacking in disclosure, etc.").

However, the compounds capable of interacting with a receptor are generally limited to those having a specific functional group, specific molecular structure and size, and specific hydrophilicity/hydrophobicity. In view of this, the compounds lacking in disclosure, etc. cannot be presumed to have the same antagonistic effect on N-type calcium channels as the compounds specifically disclosed in the description. The compounds lacking in disclosure, etc. cannot hence be considered to be adequately supported by the description.

Therefore, the compounds lacking in disclosure, etc. cannot be adequately judged as to whether a prior art technique has relevance to them (in particular, with respect to inventiveness).

An international search report was not made with respect to the following compounds and medicines containing any of these:

- a) compounds in which A is neither $CH=CH$, CH_2CH_2 , S, CH_2S , nor SCH_2 ;
- b) compounds in which V-W is N-CH;
- c) compounds in which Z is N;
- d) compounds in which Y^1 , Y^3 , and Y^4 each is S;
- e) compounds in which G is SO or SO_2 ; and
- f) compounds in which R^{11} and R^{12} each is neither formula (6) nor formula (7).

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/08809

Continuation of A. CLASSIFICATION OF SUBJECT MATTER

(International Patent Classification (IPC))

Int.Cl⁷ 31/495, 31/55, 38/05, A61P1/00, 9/00, 9/10, 11/00, 11/06,
25/00, 25/04, 25/06, 25/16, 25/28, 25/30, 43/00

(According to International Patent Classification (IPC) or to both
national classification and IPC)

Continuation of B. FIELDS SEARCHED

Minimum Documentation Searched(International Patent Classification (IPC))

Int.Cl⁷ 31/495, 31/55, 38/05, A61P1/00, 9/00, 9/10, 11/00, 11/06,
25/00, 25/04, 25/06, 25/16, 25/28, 25/30, 43/00

Minimum documentation searched (classification system followed by
classification symbols)

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